**Project Schedule with Critical Path Method (CPM) Analysis**

**Tool: Primavera P6 / MS Project-Compatible**

**A. Key Project Phases with Duration**

| **Task ID** | **Task Name** | **Duration (Days)** | **Dependencies** |
| --- | --- | --- | --- |
| 1 | Project Initiation | 5 | — |
| 2 | RF Planning & Site Survey | 20 | 1 |
| 3 | Regulatory Approval & Spectrum Allocation | 15 | 1 |
| 4 | 5G Core Infrastructure Setup | 25 | 2, 3 |
| 5 | RAN Deployment | 30 | 4 |
| 6 | SON Integration Testing | 20 | 5 |
| 7 | SDN & Security Implementation | 15 | 4 |
| 8 | Monitoring Dashboard Deployment | 10 | 6, 7 |
| 9 | Community Engagement & Awareness | 10 | 2 |
| 10 | Final Testing & Handover | 5 | 8, 9 |

**B. Critical Path Analysis (CPM)**

**Critical Path:**  
1 → 2 → 4 → 5 → 6 → 8 → 10

* **Total Duration:** **105 days**
* Any delay in these tasks directly delays project completion.
* **Slack Time:**
  + Task 3 and 9 have float (non-critical)
  + Risk management can reprioritize regulatory approval parallel to RF planning

**C. Milestones**

| **Milestone** | **Due Date** |
| --- | --- |
| Project Charter Signed | Day 5 |
| RF Plan Completed | Day 25 |
| Core Setup Complete | Day 50 |
| RAN Live in Urban Test Zone | Day 80 |
| SON & Dashboard Live | Day 95 |
| Final Handover & Review | Day 105 |